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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,042	12/14/2000	Denise M. Genty	AUS9-2000-0597-US1	7840

7590 07/22/2004

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EXAMINER	
SIMITOSKI, MICHAEL J	

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/737,042	GENTY ET AL.	
	Examiner	Art Unit	
	Michael J Simitoski	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☒ Claim(s) *12,13 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 December 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-19 are pending.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 5 & 9 present the limitation of "continuously" and "periodically" checking/determining if higher-priority packets have arrived so as to differentiate the terms, but the limitations are not clearly defined in the specification.

3. The disclosure is objected to because of the following informalities:

a. On page 3, line 27, "cause" should be replaced with "caused".

b. On page 6, line 9, "give" should be replaced with "gives".

Appropriate correction is required.

Claim Objections

4. Claim 12 is objected to because of the following informalities: "a internet protocol security" should be replaced with "an Internet protocol security". Appropriate correction is required.

5. Claims 13 & 15 are objected to because of the following informalities: "internet" should be capitalized. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 5 & 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification lacks specific mention of "continuously" and "periodically" checking/determining if higher-priority packets have arrived so as to differentiate the terms

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 5 & 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims suggest a distinction between "continually" and "periodically", where periodically suggests a clock signal and continually suggests some analog mechanism.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,687,700 to Cornelius et al. (Cornelius). Cornelius discloses transferring network packets over a computer network (col. 5, lines 15-22) based on a policy wherein network packets having a high priority are transferred before network packets having a low priority (col. 13, lines 50-53), and performing cryptographic processing of the network packets using the policy (col. 13, lines 43-49). Cornelius further discloses a quality of service policy module/request handler, quality of service module/request handler and an Internet protocol security module/transmitter and receiver (Fig. 1).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 4 & 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius, as applied to claim 1 above, in further view of "Quality Of Service: Priority Traffic" by Higgins. Cornelius lacks specifically a quality of service model. However, Higgins teaches that quality of service/QoS represents policies defined to give priority to selected data through a network so that

important applications get preferential treatment (page 2, ¶1-2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a quality of service policy model in the environment of Cornelius. One of ordinary skill in the art would have been motivated to perform such a modification to enable certain applications to receive preferential treatment, as taught by Higgins (page 2, ¶1-2).

14. Claims 5-6, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius, as applied to claim 1 above, in further view of U.S. Patent 5,497,371 to Ellis et al. (Ellis). Cornelius discloses transmitting the highest priority data message/packets (col. 13, line 50-52) when the next message is ready (col. 3, lines 52-65), but lacks continually checking whether a higher-priority network packet than a network packet being processed is available and suspending processing of the network packet being processed and processing instead the higher-priority network packet. However, Ellis teaches that to reduce delay in applications (video, etc) that are sensitive to delay (col. 1, lines 17-33), packets of multiple priorities can be sent over a single link, but at any time, a higher priority packet will interrupt/suspend the transmission of a lower priority packet (col. 3, lines 34-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to continually check whether a higher-priority network packet than a network packet being processed is available/buffered and suspend/interrupt processing of the network packet being processed and processing instead the higher-priority network packet. One of ordinary skill in the art would have been motivated to perform such a modification to reduce delay in applications that are sensitive to delay, as taught by Ellis (col. 1, lines 17-33 & col. 3, lines 34-67).

15. Claims 9 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius in view of Higgins, as applied to claim 7 above, in further view of Ellis. Cornelius discloses transmitting the highest priority data message/packets (col. 13, line 50-52) when the next message is ready (col. 3, lines 52-65), but lacks periodically checking whether a higher-priority network packet than a network packet being processed requires cryptographic processing and stopping processing of the network packet being processed and processing instead the higher-priority network packet. However, Ellis teaches that to reduce delay in applications (video, etc) that are sensitive to delay (col. 1, lines 17-33), packets of multiple priorities can be sent over a single link, but at any time, a higher priority packet will interrupt/suspend the transmission of a lower priority packet (col. 3, lines 34-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to continually check whether a higher-priority network packet than a network packet needs processing/buffered and stop/interrupt processing of the network packet being processed and processing instead the higher-priority network packet. One of ordinary skill in the art would have been motivated to perform such a modification to reduce delay in applications that are sensitive to delay, as taught by Ellis (col. 1, lines 17-33 & col. 3, lines 34-67).

16. Claims 11-16 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius in view of Higgins, as applied to claim 7 above, in further view of "Antioffline – Putting the Hero in Heroin" by BSD.

Regarding claim 11, Cornelius, as modified above, lacks using Internet security programs for encrypting and decrypting the network packets. However, BSD teaches that using the IPSec protocols offers the benefits of confidentiality, integrity, authenticity and replay protection to IP packets (§13.2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Internet protocol security programs for encrypting and decrypting the network packets. One of ordinary skill in the art would have been motivated to perform such a modification to gain the benefits of confidentiality, integrity, authenticity and replay protection to IP packets, as taught by BSD (§13.2).

Regarding claims 12-16, Cornelius discloses transferring network packets over a computer network (col. 5, lines 15-22) based on a policy wherein network packets having a high priority are transferred before network packets having a low priority (col. 13, lines 50-53), and performing cryptographic processing of the network packets using the policy (col. 13, lines 43-49). Cornelius further discloses a quality of service policy module/request handler, quality of service module/request handler and a Internet protocol security module/transmitter and receiver (Fig. 1). Cornelius lacks specifically a quality of service model. However, Higgins teaches that quality of service/QoS represents policies defined to give priority to selected data through a network so that important applications get preferential treatment (page 2, ¶1-2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a quality of service policy model. One of ordinary skill in the art would have been motivated to perform such a modification to enable certain applications to receive preferential treatment, as taught by Higgins (page 2, ¶1-2). Cornelius, as modified above, lacks using Internet security programs for encrypting and decrypting the network packets. However, BSD

teaches that using the IPSec protocols offers the benefits of confidentiality, integrity, authenticity and replay protection to IP packets (§13.2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Internet protocol security programs for encrypting and decrypting the network packets. One of ordinary skill in the art would have been motivated to perform such a modification to gain the benefits of confidentiality, integrity, authenticity and replay protection to IP packets, as taught by BSD (§13.2).

Regarding claim 18, Cornelius discloses decrypting the network packets in order of priority with the highest-priority network packet being processed first (col. 13, lines 54-65).

17. Claims 17 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius, Higgins and BSD, as applied to claim 15 above, in further view of Ellis. Cornelius lacks suspending processing of the network packet being processed and processing instead the higher-priority network packet. However, Ellis teaches that to reduce delay in applications (video, etc) that are sensitive to delay (col. 1, lines 17-33), packets of multiple priorities can be sent over a single link, but at any time, a higher priority packet will interrupt/suspend the transmission of a lower priority packet (col. 3, lines 34-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to continually check whether a higher-priority network packet than a network packet needs processing/buffered and stop/interrupt processing of the network packet being processed and processing instead the higher-priority network packet. One of ordinary skill in the art would have been motivated to perform such a modification to reduce delay in applications that are sensitive to delay, as taught by Ellis (col. 1, lines 17-33 & col. 3, lines 34-67).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. The Irvine reference is cited for teaching the integration of security services, such as encryption, into QoS to prevent the security services from interfering with QoS guarantees.

b. The Bhattacharya et al. reference is cited for teaching the need to consider QoS and security policies as a single policy.

c. The Lim reference is cited for teaching the importance of regulating traffic at both the sending and receiving nodes, using both IPSec and QoS.

d. The Sprunk reference is cited for teaching the 'qos pre-classify' feature of Cisco IOS, which allows PQ (priority queuing) capability to the encryption stage.

e. The Cavium reference is cited for teaching the need for priority based security processing.

f. The Welcher reference is cited for teaching Cisco IOS 12.1 which includes the qos pre-classify feature (allows priority/QoS data to be appended to the encrypted packet before sending, which in turn allows QoS enforcement by equipment that cannot read the encrypted packet).

g. The Cisco reference is cited for teaching QoS, prioritizing traffic, class queuing and QoS for VOIP.

h. The Shukla reference is cited for teaching QoS/NAT compatibility with VPN/IPSec.

i. The Cisco White Paper reference is cited for teaching prioritizing traffic before encryption, where traffic is selected from the queue based on priority and then encrypted and transmitted.

j. The Pandya reference is cited for teaching QoS prioritizing in VPNs (secured often with IPSec).

k. The '700 (Haddock et al.), '221 & '150 patent references are cited for teaching policy based QoS using priority packet scheduling.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (703)305-8191. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The examiner can also be reached on alternate Fridays from 6:45 a.m. – 3:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703)308-4789.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, DC 20231
Or faxed to:
(703)746-7239 (for formal communications intended for entry)
Or:
(703)746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJS
July 7, 2004

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